How was air quality measured at Rocky Flats? Is air quality currently monitored?

The "Air Contamination" section of the final cleanup decision document for the site, the Corrective Action Decision / Record of Decision (CAD/ROD) states (pg. 29):

> "Monitoring programs and other studies were conducted during both the production era and cleanup phase at Rocky Flats. These data show that contaminant emissions and resulting ambient airborne concentrations during both the weapons production era and cleanup phase were always compliant with all regulatory requirements. In fact, compliance monitoring at the facility fence line showed maximum airborne radionuclide concentrations of no more than three per cent of the limiting standard during the entire cleanup phase. With completion of all accelerated actions and the attendant removal of all historical air emissions sources except for wind erosion of the minor, remnant contamination in surface soils, future air emissions from the site will be less than those in the past."

The decision document acknowledges that re-suspension of residual radioactive contaminants attached to surface soil particles remains a potential source of ongoing air emissions. However, the most significant sources of radionuclide contamination were removed during cleanup (former processing and waste storage buildings were decommissioned, decontaminated and demolished and contaminated soils were removed) and the site is now much less susceptible to air emissions. The document states (p. 30):

> "Air modeling conducted for radionuclide parameters predict that, even for scenarios involving a fire in the historic 903 Pad area, emissions will be much lower than the EPA's ten millirem benchmark level for an airborne exposure pathway."

Air monitoring essentially began when the Rocky Flats Plant began operating; large-scale, continuous air monitoring began as early as 1971. The Department of Energy conducted effluent monitoring (stack and building emissions) and ambient air monitoring to demonstrate regulatory compliance, as well as to monitor fugitive radionuclide emissions from decommissioning, remediation and demolition operations. At its peak, the radioactive ambient air monitoring included 39 samplers operating continuously both on-site and off-site.

Remedial Investigation/Feasibility Study:
www.lm.doe.gov/Rocky_Flats/Regulations.aspx#RIFS

The air pathway was investigated as part of the comprehensive study. Section 6 of this report discusses the nature and extent of air contamination.

Wind tunnel experiments were conducted at seven off-site locations to measure the effects of wind erosion on different terrains. These investigations are described in a three-volume report of the investigation of Operable Unit 3 (Off-Site Areas). Wind tunnel studies were also conducted on-site following a prescribed burn in 2002 to determine the effects of fire on air-borne contamination. Conclusions from this test burn were incorporated into the calculations for the site's soil action levels.

Volume one of the remedial investigation report:
www.lm.doe.gov/cercla/documents/rockyflats_docs/OU03/OU03-A-000465.pdf

We also ran a couple of monitoring networks – one with stations inside the plant boundary and a network of five perimeter samplers. During closure, EPA set up monitors next to cleanup projects to ensure that radiation limits for workers were not exceeded.

Now that the major potential sources in the surface soil have been removed, there is even less of a chance of radiological contaminants becoming airborne. Because of the history of analyses at or near the detection limit at the state monitoring stations, our air sampling program was terminated in December 2005. The Department of Energy discontinued its air sampling in 2007.